

AMENDMENTS TO THE SPECIFICATION

Please replace paragraph [0002] with the following amended paragraph:

[0002] In today's competitive wireless business environment and with the new capability of phones, cellular phone carriers are forced to select a preferred roaming carrier when a subscriber's cellular phone is roaming. Conventionally, the method used to select the preferred roaming carrier is to have a wireless device, such as a wireless ~~telephone~~ telephone, contain a database of potential roaming systems. Each roaming system can be tagged as home, preferred, neutral, non-preferred, or barred, etc. Once the wireless device locks onto a system, and identifies the system, the database contained within the wireless device is consulted for operation preference and reselection is made as necessary. Generally, this database is contained in a non-volatile memory of the wireless device. It can be preloaded at time of manufacture or loaded at activation time and potentially reloaded periodically as inter-carrier roaming agreements are changed. Potentially the phone can be returned to point of purchase for the update of this database, but over-the-air updates are more convenient and facilitate transparent (to the subscriber) and more frequent updates.

Please replace paragraph [0036] with the following amended paragraph:

[0036] It is one aspect of this invention to directly route a message to a mobile device 9. As mentioned above, an example of an instance where an immediate delivery is likely is during activation, [[i.e.]] i.e., when a customer purchases a new mobile device 9. The current IRDB, as well as other pertinent provisioning information, should be downloaded to the mobile device 9 upon activation and prior to use. A customer agent may activate the mobile station 9 on a provisioning system by requesting a message to be sent through the CNOT system network to modify information stored by the mobile device 9.

Please replace paragraph [0063] with the following amended paragraph:

[0063] The subscriber profile database 2 contains subscriber information, such as, a mobile identification number (MIN), an electronic serial number (ESN), a current IRDB that is to be loaded to the subscriber, a desired IRDB that is desired to be loaded to the subscriber, and/or any other pertinent information relative to a profile of the subscriber.

Please replace paragraph [0080] with the following amended paragraph:

[0080] Additional methods for acquiring availability information include, for example: 1) mobile registration triggers (MRT); 2) a passive monitoring system contained in the system tied onto the links passively, containing SS7 monitoring capability, 3) a feed from a commercially available SS7 monitoring system (such as AGILENT acceSS7.RTM., or INET Geoprobe.RTM.; 4) a mechanism where every piece of traffic passing through the STP is echoed to a TCP/IP port where it is forwarded to another processor ([[i.e.]] i.e., MAS); and 5) and all necessary SS7 messages such as IS-41 Registrations GSM MAP Update Location messages, and the like are filtered and sent to the CNOT passive server.

Please replace paragraph [0082] with the following amended paragraph:

[0082] Alternatively, the passive monitoring system 21 may be a monitoring system, such as ~~for example as, for example,~~ AGILENT acceSS7.RTM., or INET Geoprobe.RTM., in which registrations 12 may be received by the CNOT system 10. In an INET, message traffic may be monitored for availability producing events, such as registrations 12. In the INET, a plurality of probes or links may be placed at various locations in the SS7 network 20 which monitor message traffic. Information, such as registrations 12 and GSM MAP update location ~~messages~~ messages, are monitored and availability (presence and location) about the mobile device 9 may be derived.

Please replace paragraph [0085] with the following amended paragraph:

[0085] Delivery of a message may be designated by "invoked delivery." Invoked delivery is performed by a virtual SMSC operating in either the active server 50 or the passive servers 70 that perform functions similar to an SMSC when processing IRDB downloads. The invoked delivery process reads the contents of the concerned database 54 into memory and sends an IS-41 SMS request message or a GSM MAP Send Routing Information for Short Message (SRIS) to the HLR 26 requesting availability of the mobile device 9. If the mobile device 9 is available in the market, it will download the message data via the IS-41 SMDPP (short message data point-to-point bearer service) or the GSM MAP Forward Short Message (FSM) message to the mobile device 9. However, if the mobile device 9 cannot be located, the central server 5 will forward the message to a passive server 70 so that when the mobile device 9 becomes available

(or registers with the passive server [[70]] 70), the passive server 70 will download the IRDB information to the subscriber. Other modes for delivery of a message, now known or later developed, are also possible alternatives in accordance with systems and methods of this invention.

Please replace paragraph [0095] with the following amended paragraph:

[0095] The FIFO 55 is a database where messages are sent via the communication link 7. The FIFO 55 is capable of receiving requests at any interval. Since there is a predetermined amount of bandwidth available on the SS7 20 (e.g., the typical SS7 link is a 56 K link, [[i.e.]] i.e., 56,000 bits per second), the number of messages that may be processed at one time is limited to one at a time. Therefore, the FIFO 55 is provided to organize the order in which the messages are processed. At times, a large number of message requests may be received, and other times, a lower number of requests may be received. As a result, the FIFO 55 organizes the message requests coming in, in a first-in first-out manner.

Please replace paragraph [0096] with the following amended paragraph:

[0096] The FIFO 55 may be equipped with a time-out feature. The time-out feature is ~~setup~~ set up so that the longer the message sits in the FIFO 55, chances are greater that the mobile device 9 is not going to be located. For example, if the message sits in the FIFO 55 for one minute, the chances of locating the mobile device 9 are reasonably good. But if the message sits in the FIFO 55, for example, 30 minutes, the mobile device 9 may no longer be turned on, or may no longer be in the cell, or the switch it was previously present and thus may not be located. As a result, the FIFO 55 may time-out. When a time-out occurs, a message may be sent to the central server 5 informing of the time-out and requesting additional instruction, such as instructions for rerouting the message to the passive server 70 for delivery, or canceling the request to locate the mobile device 9.

Please replace paragraph [00107] with the following amended paragraph:

[00107] However, if the point code is not received, or a message is received that says that subscriber is unavailable, the active server 50 ~~may for example~~ may, for example, go back and delete the subscriber out of the concerned database 54 and send a message over communication

link 7 back to the central server 5 indicating that the subscriber is unavailable and/or cannot be located.

Please replace paragraph [00108] with the following amended paragraph:

[00108] The central server 5 may attempt to ~~resend that~~ resend that message several times. That is, the central server 5 may make a determination as to whether it should attempt the delivery of the message multiple times. For example, if the return message 61 is a "failure" and the central server 5 determines that ~~the message~~ it is unable to deliver the message via active server 50, the central server 50 may try any number of times or may delay the delivery of the message. A counter (not shown) may be implemented in the CNOT system 10 to keep track of all of the attempts.

Please replace paragraph [00119] with the following amended paragraph:

[00119] The message assembly 56 builds the message as mentioned before with respect to the active server 50. The difference from the active server 50 is that the message in the passive server 70 is built in response to the occurrence of a triggering event. According to this example, the triggering event is the mobile device 9 registering with the ~~HLR etc.~~ HLR, etc. In addition, the message is assembled without performing a prior SMS request, as it is performed in the active server 50. This is different from the procedure in which the active server 50 actively attempts to deliver a message at the time the message is ready to be delivered by querying the HLR, regardless of whether a triggering event has occurred.

Please replace paragraph [00122] with the following amended paragraph:

[00122] In step S200, a subscriber profile is modified. Changes to the subscriber profile are made in a central server. The subscriber profile may be changed in various, ~~[[ways]]~~ different ways. Some of the various examples include, for example, the administration of changes to an intelligent routing database (IRDB), implementing provisioning system changes to the subscriber's profile, changes implemented by an accounting system server, and/or any other

mechanism that is capable of making a change to the centralized notification system in accordance with systems and methods of this invention. The routine then proceeds to step S300.

Please replace paragraph [00123] with the following amended paragraph:

[00123] In step S300, the central server generates and delivers a message including provisioning instructions to an active server. The active server actively seeks out and determines the availability of the mobile device to deliver the message as quickly as possible. New activation of a mobile device would be an example of where the active server would actively ~~seeks~~ seek out the availability of the mobile device so that new changes may be loaded into the mobile device as soon as possible to prevent delay of a subscriber's use of his new mobile device. The ~~availability~~, availability is usually included in a registration. For example, the MSC currently serving the mobile device may be determined from the registration so that the instructions may be delivered to the mobile device. The routine then proceeds to step S400.